

TRUCK OPERATION SAVES \$5 WEEKLY OVER RATES OF RAILROAD

FLEET OF MOTORS BETWEEN CHICAGO AND MILWAUKEE

Three- and a-half-Ton Car Establishes En- vialbe Record.

EXPENSE CUT DOWN

Federal Co. Demonstrates Its Service Under Adverse Conditions.

In the face of adverse weather conditions, a three and a half ton truck, equipped with Federal pneumatic tires, has established an en- vialbe record from both an operat- ing and an expense standpoint.

This truck, the property of the Federal Rubber Company, of Cuda- who, Wis., is the latest member of a fleet in operation between Milwa- kee and Chicago. Some of the trucks are equipped with solid tires and some with pneumatics.

The newest member is the heav- iest truck ever employed in the Federal Rubber Company service, which was inaugurated that the company might determine from its own experience not only the true worth of Federal tires but the ad- vancements pointed by actual serv- ice.

Five Round Trips a Week. The three-and-a-half-ton truck has been in active service since April 5. It has made five round trips a week, or one round trip each day, except Saturday and Sunday, which days are reserved for a gen- eral greasing and overhauling of the truck.

The trip sheet shows that the truck was operated during two days of snow, five days of rain and seven days on which the weather was fair. Most of the road over which the truck is operated is concrete and macadam, but there are two sections one through Zion City, about a mile in length, and one between Elletts- ville and Kenosha, which are of about the same length, which are very very bad.

Less Than 8 Miles to Gallon. The record sheet shows 14 round trips and a total mileage of 2306. The truck consumed 352 gallons of gas a week or at the rate of 2.966 m.p.g. per gallon. It used 187.6 gal- lons of oil or a mileage of 12.5 gal- lons.

The gross weight of freight car- ried was 122,300 and the running time 168 hours. "Figuring truck depreciation at the rate of 31.3 cents per mile, in- cluding 6 per cent interest on the investment, hours of overtime in- cluding several hours spent in as- sisting a 3-ton solid tire truck in after turning out a bearing, the total weekly cost amounted to \$105.47, or at the rate of 1.442 per mile. The cost of shipping by freight would have been \$457.50.

Shows Large Federal Rubber included the cost of cartage in- asmuch as this latter service is un- der contract.

This, alone, would have effected a saving of \$100 in favor of the truck operation with pneumatic tires. Last week the Federal operated a large fleet of trucks to haul be- tween Milwaukee and Chicago. 3 1/2-ton and a 3-ton truck, equipped with Federal pneumatic tires, were the only ones that successfully nego- tiated the trip, the solid-tired trucks requiring from 32 to 40 hours for a round trip.

OHIO MAY INVEST IN EDGE CONCERNS

Davis Signs Bill Permitting Banks and Corporations to Purchase Capital Stock.

NEW YORK, May 14. — Gov- Davis, of Ohio, according to re- ports received by the committee on organization of the Foreign Trade Financing Corporation, has signed the bill permitting State banks, trust companies and other impor- tant corporations in that common- wealth to invest in the capital stock of corporations organized under the Edge act. This makes a total of twelve States which within the past few weeks have taken such enab- ling action. The Florida senate has just passed an enabling act of this nature. A similar bill has passed both houses of the New York legis- lature without opposition and awaits only the governor's signa- ture. Legislation of this character is being favorably considered in other States, of which there are seventeen, where legal technicalities made such legislation necessary.

Special importance is attached to the action in Ohio in view of the seasons at Cleveland next week of the National Foreign Trade Finan- cing Corporation, the largest of the companies to be organized under the Edge act to extend long- term credits to foreign buyers of American goods and to American exporters. The corporation's orga- nization committee states that good progress is being made in the for- mation of the corporation, which with a capital of \$100,000,000 and surplus of \$5,000,000, will bring into existence financial machinery, nation-wide in scope and under the supervision of the Federal Reserve Board, to check the present hurry in American exports and, in addi- tion, to help to place the country's foreign trade on a permanently satisfactory basis.

Cleaning Silent Chains. The silent chains that are be- coming popular for camshaft and other drives should be thoroughly cleaned every time the motor is taken down. The chain should first be soaked in a bath of kerosene and then be brushed with a stiff brush to get off all dirt and grit. After cleaning the chain should be dried and then washed in hot water to which a little washing soda has been added. Next the chain should be submerged in a bath of moder- ately heavy lubricating oil and al- lowed to remain until the lubricant has reached every cranny of the bearing surface. It is a good idea to have this oil warmed through- out by immersing the chain in it, as this thing it a little and permits it more readily to reach hidden sur-

CAMPER CARRIES OWN HOTEL

It is called The Motor Camping Book (G. P. Putnam's Sons). The author is Elton Jessup, associate editor of Outing.

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The first book to be published upon the extremely popular recrea- tion of camping out with a motor car has just made its appearance. It is called The Motor Camping Book (G. P. Putnam's Sons). The author is Elton Jessup, associate editor of Outing. All campers who have read Mr. Jessup's Intimate Golf Talks are probably now better golfers and it is safe to say that motor campers who read his latest book will be better and certainly more comfortable campers.

FIRST BOOK IS PUBLISHED DEALING WITH RECREATION OF CAMPING OUT WITH CAR

Elon Jessup, Associate Editor of Outing, Is Author of Guide to Motorists.

motorist who carries an adequate camping outfit achieves the great- est degree of travel pleasure and freedom. If, on the other hand, he is inadequately equipped, the motor camping trip may sometimes be a sorry experience. Whether the camping trip be a close to home, week-end jaunt or all the way across the continent, the amount of pleasure derived is largely depend- ent upon the amount and nature of preparation before starting. That is why the book, in great part, is devoted to the subject of motor camping equipment.

Equipment Is Described. Mr. Jessup fully lives up to his promise in devoting detailed de- scription to all types of equipment used in motor camping. Luggage carriers and how to pack equipment, water containers, cooking kits, stoves and fires, food boxes, beds, tents, camp furnishings—these are some of the subjects taken up chap- ter by chapter. The book is an- ticipatingly comprehensive, both in description and illustrations. There are more than a hundred photo- graphs and drawings and three maps.

The first fourteen chapters in the book are mainly devoted to equip- ment for treating the details of highway, National parks, picking camp sites, route books, maps, map- ping and similar matters. The final chapter is devoted mainly to a valuable summary State by State of the motor laws which affect the nonresident motorist.

PRACTICAL PARAGRAPHS

Rest Remover. Make a solution of one part sul- phuric acid to ten parts water and dip in it the parts from which it is desired to remove rust. Next dip them in a bath of hot lime water and keep them in it until they have become so hot that they dry imme- diately on being taken out. Then rub the parts with dry bran or saw- dust and they will be found to be perfectly clean and may be painted with fireproof paint, blue or nickel.

Acid for Electrolyte. In preparing electrolyte for stor- age batteries nothing but chemical- ly pure sulphuric acid and distilled water should be used. Commercial grades of acid and ordinary drink- ing water contain enough metallic impurities to cause disintegration of the active material, inducing sul- phating and ruining the battery in short order.

To Straighten Front Axle. A method of straightening a front axle that has been bent in a verti- cal plane is to take two lengths of four by four inch joint, long enough to reach from the upper side of the axle, just outside of each spring plate, to a cross timber of the ceil- ing or roof of the garage. When the axle is placed between the axle at the bend, enough pressure may be applied by means of it to force the axle back into shape.

Keeping Cotter Pins. A very convenient method of keeping cotter pins of assorted sizes is to string them through the hole in the upper end of a wire. In this way when the whole lot is picked up, it is easy to select the size needed, whereas in fishing through a box of loose pins there is much chance for loss or temper.

Enameling to Prevent Rust. In order to do away with rusting of parts beneath the hood, black enameling may be resorted to with good effect. It is possible to get black enamel today, which, when properly applied, looks little inferior to the baked-on variety. Ordinary enamels which dry quickly are of little use, as they chip and flake off quickly. Parts to be enamelled should, if possible, be taken off and cleaned with a stiff wire brush. The enamel may take as long as a week to dry and care must be used to have an atmosphere free from ex- cessive dust; that means not to try to dry the enamel in a garage. Parts that may be enamelled to ad- vantage include steel fan blades, pulley arms, brackets and elbows, which are not often disturbed, ex- posed pieces of shafting, pinion wheel centers, operating rods, col- lars, etc. Even a cylinder casting may be so treated, as a good enamel will stand heat without blistering.

Battery Lifter. An admirable lifter for use in raising the battery out of the car may be made by having what are known as harness snaps riveted on the ends of a leather strap, perhaps an inch wide and a little longer than the battery. When this is snapped into place it makes a con- venient handle for juggling the bat- tery around.

Conserving Chains. It is a very good plan to shift the cross links of the tire chains from time to time. That is, move them so that they do not depend on the same link of the main chain all the time. The wear and tear on the tire chain centers at the links to which the cross chains are attached, and for this reason moving them later from time to time spreads the wear.

Two Tire Mistakes. A mistake often made by car owners is to continue using rims that have been badly dented or even slightly bent. This causes rim cut- ting, which means the end of the casing's usefulness. Another error is to neglect to keep the valve stem and stay bolts tight. When this is not done water will get into the casing on wet roads or even when the car is washed.

REPORTS INCREASE IN PRODUCTION OF NASH MOTOR CARS

C. B. Voorhis Says May Shows Big Gain Over April.

Business with the Nash Motors Company is good, which may be taken as an indication of general improvement in most sections of the country.

"In stating that business with our company is good," said Charles B. Voorhis, vice president and gen- eral manager of the Nash Motors Company, "I would not wish to be understood as meaning that the country as a whole at this time even approaches normal. But there is improvement generally through- out the country, much more pre- nounced in some sections than in others.

Gains In Production. "Our Kenosha factory this month is operating 79 per cent normal and our new plant in Milwaukee is gaining in production daily. Orders for May show a healthy increase over April. In this connection, look- ing back over the period through which the country has just passed, it may be of interest to know that in no month was production of the Nash Six and the Nash Four totally suspended.

"In fact production records of the Nash Motors Company tell an in- teresting story. The general slump showed its effect on the automobile industry the latter part of October. Nash production for that month was 2,456 cars. In November production dropped to 1,296 cars and the low- est was reached in December, with a total of 714 cars—sixes and fours.

Turn Came In January. "In January the tide began to turn, very slightly, it is true, but in that month there were produced 1,018 Nash cars. February showed another slight increase, however, March the Nash market showed de- cided improvement, the production figures for that month jumping to 2,081. The production schedule for April calls for 3,211 automobiles.

The increase each month as shown by the production records is a healthy one for the reason that Nash monthly production schedules always are handled on the basis of actual orders in hand and in de- tailed figures shown in the de- stantly figures cited came volun- tarily from distributors and deal- ers, there being no effort whatever on the part of the factory during that period to force sales.

Better Sales Record. "Actual sales and delivery figures from car dealers show that some of the cars sold at retail more Nash cars in January, February and March, this year, than they sold in the cor- responding months of last year. With the exception of a few spots, report better sales each month and each week."

It is pointed out that the greater number of sales referred to by Mr. Voorhis are for the Nash Six and the Nash Four, which have not yet been able to pro- duce in its new Milwaukee plant Nash Fours in quantities sufficient to meet the demand. The company's new four-cylinder model, however, has now reached a point where vol- ume production is possible and it is expected that within the next few months shipments will be made on a basis that will approximate the demand.

For the Tool Box. A convenient addition to the tool box is a small pack of wire nails of different sizes. These nails may be used to replace lost cotter pins and for many other purposes.

Loose Spokes. Wooden wheels with loose spokes emit a squeaking sound which is intensely annoying. The noise will be more distinct when the car is being driven around a corner. Some- times this looseness may be obvi- ated by replacing one or more spokes, or it may be cured by forc- ing small wooden wedges between the spokes and the hub, but a wheel- man can do the job in a few minutes.

Rubber Hose. This is the time of year to renew the rubber hose connections of the cooling system. These connections deteriorate after a season's use and sometimes the inside layer of fabric separates from the rest and im- pedes circulation, without the de- tect being apparent from the out- side. No kinks should be allowed in such connections and the clamp fasteners should be properly se- cured. Where rubber hose and bend- ing in a good plan is to reinforce it by a brass coil spring, which is a good fit inside. This prevents any flattening at the bend and cracking, resulting eventually in a leak.

Lubricating Shafts and Bolts. Shafts and bolts or spring bolts may be made self-lubricating by drilling six or eight 3-16th inch holes in a new bushing and packing them with graphite. The holes must be repacked about once in six months.

Cotter Pin Puller. A very convenient cotter pin pull- er may be made by bending the end of a piece of 1/4 inch rod into the shape of a button hook. On the other end a T-shaped handle is riv- eted. An additional convenience is to drill a piece of 1-inch round stock and place it on the body of the puller for use as a sort of slid- ing hammer. A series of taps with this hammer on the end of the pull- er will loosen the recalcitrant cot- ter pin.

Inspection Window. An ingenious car owner who had had trouble because of stoppage in the oil pipe which runs from the transmission case of the Ford to the engine inserted a small mica window about two inches in diame- ter. The window is secured by a steel ring one thirty-second of an inch in thickness, and this ring is held by round head screws. A felt gasket is placed between the mica and the transmission cover and the upper side of the mica is varnished with shellac.

Clutch Trouble. Clutch trouble is one of the com- monest complaints among car own- ers. The clutch throwout collar needs daily lubrication, and in many cases failure to give this even for a single day may mean clutch trouble. Give the clutch the lubrication it needs.

Armistice Car Goes to Museum



It's just an ordinary French dining car, but it has become fa- mous enough to be placed in the Invalides Museum at Paris. It was here that the allies and Germans signed the armistice, No- vember 11, 1918, which ended the war.

FIRESTONE SELLS WORKERS SHARES

Over 10,000 Employees Buy Stock Interest in Tire Concern.

AKRON, Ohio, May 14. — The trend of American wage-earners' thought and action toward new habits of thrift and investment is evidenced in the announcement of the Firestone Tire and Rubber Com- pany today that every one of its several thousand employees had be- come stockholders.

Within twelve hours after an- nouncement by President H. S. Fire- stone of a new allotment of em- ployees' stock, subscription records showed that every employee had be- come a stockholder, each subscriber taking at least two shares, while over-subscriptions on the allotment amounted to about 50 per cent.

Over 10,000 Employees. This places the Firestone Com- pany in a most distinctive position among industrial concerns employ- ing more than 10,000 people, as it is the only organization of its rank on record having every man and woman on its payroll a shareholder in the company.

It brings the total number of shares subscribed for by employees close to 45,000. So quick was the response to the stock ownership privilege and so large the subscriptions that officials of the company are expected to con- sider allotting an additional amount of shares for purchase by employees.

In offering the stock to workers in the Firestone factories, Mr. Fire- stone wrote to each employee: "For most of us it is not easy to acquire the habit of saving. We need a special inducement and this common stock plan is an opportu- nity not only to create the habit or saving, but to become a stockholder in the company."

In commenting upon the reception given the company's offer by the employees, Mr. Firestone said: "Aside from the great personal gratification in the matter there is, I believe, a far-reaching significance in this recent experience of our company. A year ago advice about thrift and savings was lost in the whirl of prosperity that carried ex- travagance and waste everywhere.

No Substitute for Work. "It took the experience of the past eight or ten months to teach us that there is no short cut to permanent prosperity—that there is no substitute for work and thrift in the attainment of happiness and prosperity. How well that lesson has been learned is proved by the reception which our stock offer re- ceived."

Two of the outstanding features of the Firestone plan have been to furnish employees with a 6 per cent savings account and at the same time give them the advantage of sharing in the prosperity and prof- its of the company through divid- ends and the increase in the mar- ket value of their stock holdings.

The company has made two pre- vious offers of stock to employees with special payment plans at a price below the market value.

Dirt Causes Squeaking Brakes. Chronic squeaking in the braking system is generally due to dirt that has been imbedded in the lining and is pressed against the drum when the brakes are operated. Usually this dirt may be washed out with kerosene, but if it is too firmly in- trenched that it refuses to come out with this treatment a little resin mixed with castor oil and ap- plied to the bands will cure the trouble.

Truly Fine Motor Much of this is due to the fine motos performance. The fuel mixture—not the air alone—is pre-heated by the hot-spot. This means better acceleration, smoother operation, and more power from less gasoline. Combustion is more complete. Cylinders are not likely to be scored, or bearings burned out, be- cause of dilution of the oil in the crank- case.

AUTO INDUSTRY, BACK ON ITS FEET, SHOWS BIG GAINS

Head of Big Motor Co. Reviews Conditions in 169 Cities.

"The automobile business, a true barometer of the nation's business, will make gains during the next four years at home and abroad be- yond realization of the most fertile imagination."

That's the picture Frank B. An- sted, president of the United States Automotive Corporation, the chief subsidiary of which is the Lexington Motor Company, draws of the indus- try as a result of a two months' in- tensive touring and business inves- tigation trip on the West and Northwest Coast.

Sees Business Rebuilding. Mr. Ansted visited 169 towns and cities from Portland and Seattle to old Mexico. He personally worked with scores of distributors and dealers. He conferred with eighty-nine bankers. He discussed condi- tions with hundreds of farmers and other workers. He addressed twenty-six commercial organiza- tions and talked business conditions with innumerable individuals. And his conclusions, to use his own words, are these:

"Business is rebuilding through legitimate and sane channels. We are recovering under a sound mon- etary system and although the pro- cess must, of necessity, be slow, it is making progress along safe, sub- stantial lines.

"It will not be a return to normal, but the building of a new normalcy. Thrift, work, patience and study will be the essentials for success in the new business era. Waste will be eliminated in so far as possible.

Export Trade Grows. "The automobile industry is ad- justing itself to the new conditions. It is already on a sound basis. Do- mestic sales are improving. The export trade in American-made ma- chines is growing rapidly.

"The recovery is coming through sound, safe reorganization and re- adjustment. Heretofore, when this country recovered from serious business stagnation and depression, it was by insane methods—bank- ruptcies, courts, receiverships, and similar methods.

"The readjustment now is coming through sound business methods without the enormous waste of other days. The readjustment is not coming without sacrifices, but they are sacrifices not comparable with those of other business de- pressions."

Will Exceed That of 1920. "In January of this year, the ex- port business of the United States was \$25,000,000, and January is considered a slow month for ex- ports. But it looks as though this year our export trade will exceed that of 1920, which was many mil- lions of dollars past the \$5,000,000-000 mark.

"One of the greatest drawbacks to our foreign trade development," Mr. Ansted said, "is due to the fact that the average American business man does not know the first principles of exporting."

One of the serious problems con- fronting American business, Mr. Ansted believes, is the railroad situa- tion.

Approximately \$2,000,000 is avail- able every working day during the present year for expenditure upon highways of the United States ac- cording to a statement yesterday by Prof. C. J. Tilden, director of the highway and highway transport education committee.

The actual sum available from State and county bond issues and Federal aid for the year is \$600,000,000, a sum 50 per cent greater than the total cost of the Panama Canal, according to figures obtained from the bureau of public roads.

This point was made by Prof. Tilden in stressing the need for more courses in highway construc- tion and economics in colleges and universities. To spend this amount wisely, he said, would require the services of more than 10,000 trained highway engineers. At this time, universities are graduating only about 1,000 civil engineers annually. Another and more popular avenue of whom only a small percentage turn to highway construction. The supply is far short of the demand, according to Prof. Tilden.

Through the agency of the com- mittee of the highway transport education committee, Prof. Tilden is endeavoring to per- suade institutions of higher learn- ing to include courses in highway engineering in their regular curricu- lums. Prof. Tilden occupies the chair of engineering mechanics at Yale University, but is on leave as director of the committee.

News of the contest has been re- ceived daily from all sections of the country. Even the island pos- sessions and the territories are seeking information on the contest. "News of the contest has been con- veyed to pupils by their teachers, and school superintendents in re- sponse to an announcement sent out by Dr. P. P. Claxton, United States commissioner of Education, who is chairman of the highway transport committee. Essays must be not more than 500 words in length and must be in the hands of local com- mittees not later than June 15, when the contest closes. Only pupils of high school grade are eligi- ble to compete. Virtually all State superintendents are naming State com- mittees to award State honors and prizes, and are announcing the con- test to their pupils. Commissioner Claxton will name the national committee which will award the main prize.

As a means of encouraging pupils to write essays, the committee re- quested one of its members, H. R. Firestone, Akron, Ohio, to offer a national prize. Mr. Firestone put up a four years' university scholar- ship, with a value of not less than \$1,000, as the award for the best essay written on this subject.

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